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## GEOGRAPHICAL PUBLICATIONS

### (Reviews and Titles of Books, Papers, and Maps)

For key to classification see "Explanatory Note" in the January number, pp. 57-61

#### NORTH AMERICA

##### UNITED STATES

###### General

WOODSON, C. G. **The Education of the Negro Prior to 1861: A History of the Education of the Colored People of the United States from the Beginning of Slavery to the Civil War.** 454 pp. Bibliogr., index. G. P. Putnam's Sons, New York, 1915. \$2. 8 x 5½.

The book is a clearly written and somewhat detailed account of negro education in America from early colonial days to the War of Secession. The facts are grouped around the well-sustained central thread of the white man's changing attitude toward the negro. At first the colonists feared to educate the newly arrived Africans for fear that education would mean Christianization. That would have necessitated liberation, for the church forbade the enslavement of Christians. Then the prelates of the Church of England declared that Christians of African descent might be kept in servitude. Thereupon educational facilities slowly increased for a century and a half. By about 1830 a considerable number of schools for free negroes were in operation not only in the North but in the South. The next step was a strong reaction, especially in the South. Its cause was partly the invention of the cotton gin, the steam engine, and other forms of machinery which caused the demand for cotton to increase enormously. Cotton picking requires an abundance of the cheapest, least intelligent kind of labor. Educated negroes are of little use in cotton fields. The other cause of the setback of negro education was the growing abolition movement in the North, which aroused insurrections among the slaves and alarmed the slave holders. The owners of slaves feared that more education would increase the demand for freedom.

Mr. Woodson's book is geographical only as it indirectly illustrates the contrast in the attitude of the North and South. Even in the days when both sections believed in slavery, the climatic contrast caused them to view the negro problem in different lights.

ELLSWORTH HUNTINGTON.

ARNOLD, RALPH. **The Petroleum Resources of the United States.** *Econ. Geology*, Vol. 10, 1915, No. 8, pp. 695-712.

CAMERON, F. K. **Possible Sources of Potash in America.** *Journ. Franklin Inst.*, Vol. 180, 1915, No. 6, pp. 641-651. [Abstracted in the *March Review*, p. 217.]

CHURCH, J. E., JR. **Snow Surveying: Its Problems and Their Solution.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 607. [Author's abstract of paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916. "The problem of precipitation and run-off has become the dominant meteorological problem in the semi-arid states where irrigation is fundamental to agriculture."]

— **Climatological Data for the United States by Sections, December, 1915 (Vol. 2, No. 12).** Maps, diagrs. *U. S. Weather Bur. [Publ.] No. 571.*

FRANKENFIELD, H. C. **Sleet and Ice Storms in the United States.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 608. [Author's abstract of a paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916.]

GEYER, O. R. **Coming Restoration of the Mississippi as an Important Artery of Commerce.** *Ills. Sci. Amer.*, Vol. 114, 1916, No. 9, pp. 215, 228, and 229.

HAZARD, D. L. **Distribution of the Magnetic Declination in the United States for January 1, 1915.** 16 pp. Map. *U. S. Coast and Geod. Surv. Special Publ. No. 33.* Washington, D. C., 1915. [See "A New Isogonic Chart of the United States" under Geographical Record in this number, p. 298.]

HUMPHREYS, W. J. **Earthquakes Felt in the United States During 1915.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, pp. 634-635.

KULLMER, C. J. **Monthly Storm Frequency in the United States.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 610. [Author's abstract of a paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916. "The present

investigation covers the 30-year period 1883-1912 and furnishes a 30-year map of the distribution of storms for each month and also three 10-year maps for each month covering the same period."']

LANE, F. K. **Economic Preparedness: Our Natural Resources and How They Are Being Developed.** *Sci. Amer.*, Vol. 114, 1916, March 4, pp. 237 and 258.

LUSCHAN, FELIX VON. **Die Neger in den Vereinigten Staaten.** *Kolon. Rundschau*, 1915, No. 11-12, pp. 504-540. Berlin.

MATTOON, W. R. **Shortleaf Pine: Its Economic Importance and Forest Management.** 66 pp. Map, diagrs., ills. *U. S. Dept. of Agric. Bull. No. 308.* Washington, D. C., 1915. [A text-map shows the geographical and commercial distribution of the shortleaf pine in the United States.]

MCSWEENEY, E. F., J. A. CONRY, AND LOMBARD WILLIAMS. **Analysis of the Present Foreign Trade of the United States.** 19 pp. *Directors of the Port of Boston Bull. No. 3.* Boston, 1916. [Claims that less than one-third of the \$1,000,000,000 trade balance of the United States for the year ending June 30, 1915, represents permanent trade, i. e. a smaller figure than those for the previous four years.]

NORTHROP, J. D. **Petroleum in 1914.** pp. v and 893-1098. *Mineral Resources of the U. S., 1914*, Part II. U. S. Geol. Survey, Washington, D. C., 1916.

— **Shipping Industry, Fortunes of the.** *The Nation*, No. 2645, Vol. 102, 1916, pp. 294-295.

SMITH, J. R. **Farming Appalachia.** 111s. *Amer. Review of Reviews*, Vol. 53, 1916, No. 3, pp. 329-336. [A plea for national mountain farming—for the cultivation of such important tree crops as the mulberry, pecan, and chestnut, accompanied with raising of hogs. Present farming in Appalachia is contrasted with conditions in Corsica, where the chestnut and goat play so important a part in the farm economy.]

STERRETT, W. D. **The Ashes: Their Characteristics and Management.** 88 pp. Maps, diagrs., ills. *U. S. Dept. of Agric. Bull. No. 299.* Washington, 1915. [Accompanied by a map of the United States east of the 100th meridian, 1:7,400,000, showing the commercial distribution of the ash tree as indicated by Census returns of lumber cut by counties in 1910.]

— **Thunderstorms in the United States, 1904-1913, Percentage Frequency of.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, pp. 619-620.

WARD, R. DEC. **The Thunderstorms of the United States as Climatic Phenomena.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 612. [Author's abstract of a paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916. See also the note under Geographical Record in this number on the "Distribution of Thunderstorms in the United States," p. 297.]

— **War-Time Commerce, Historic Results of.** *The Nation*, No. 2643, Vol. 102, 1916, pp. 233-234. [An interesting feature of the United States trade of 1915 is the rise in value of "foreign merchandise reexported." It exceeds for the first time since 1806 the figures of the Napoleonic maximum, when neutral American shipping commanded the West Indian export trade.]

#### *South Atlantic States*

— **Baltimore, Consular District of (Comprising the States of Maryland, Virginia, and West Virginia), Trade of the, Report for the Year 1914 on the.** 48 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5543. London, 1915.

— **Hydro-Electric Systems, Interconnected, in the South.** Map. *Bull. Atlantic Deeper Waterways Assoc.*, Vol. 8, 1916, No. 3, pp. 17-18.

PRATT, J. H., AND H. M. BERRY. **Proceedings of Seventh Annual Drainage Convention of the North Carolina Drainage Association Held at Wilson, North Carolina, Nov. 18 and 19, 1914.** 76 pp. Diagrs., bibliogr. *North Carolina Geol. and Econ. Surv. Econ. Pap. 41.* Raleigh, 1915. [Includes papers on principles of drainage and drainage legislation in North Carolina.]

ROSS, F. E. **Latitude Observations with Photographic Zenith Tube at Gaithersburg, Md.** Diagrs., ills. *U. S. Coast and Geod. Surv. Special Publ. No. 27.* Washington, D. C., 1915.

— **Savannah, Consular District of, Trade of the, Report for the Year 1914 on the.** 41 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5548. London, 1916. [While the cotton trade in general suffered heavily, the product known as "linters"—the fiber removed in the final ginning of the seed—acquired a new importance from its use in the manufacture of explosives; export and price increased concomitantly.]

*North-Central States*

— **Homeseeker, A Personal Word with the.** 72 pp. Map, ills. *Wisconsin Dept. of Agric. Bull. No. 2.* Madison, 1916. [General summary of Wisconsin's resources, with emphasis on agriculture, to attract intending settlers.]

HORE, R. E., W. E. HOPPER, AND R. A. SMITH. **Mineral Resources of Michigan, with Statistical Tables of Production and Value of Mineral Products for 1914 and Prior Years.** 359 pp. Maps, diagrs., ills. *Michigan Geol. and Biol. Surv. Publ. 19: Geol. Series 16.* Lansing, 1915.

SMITH, J. W., AND C. A. PATTON. **Ohio Weather for 1914.** pp. 293-372. Maps. *Ohio Agri. Exper. Sta. Bull. 287.* Wooster, Ohio, 1915. [The usual summary of records has been supplemented with a series of diagrammatic maps.]

— **St. Paul, City of, Annual Report of the Commissioner of Public Works of the, for the Year Ending December 31, 1914.** 172 pp. Maps, diagr., index. [Material for city geography in the set of five maps, 1:27,600, showing extent of graded, paved, and sprinkled streets, parkways, sewers, and the type of railroad crossings, and in the set of three maps, 1:63,360, showing ward boundaries, territorial growth, and land owned by railroad companies.]

Original forest and prairie area in Illinois. 13,500,000 approx. Accompanies "An Ecological Study of Prairie and Forest Invertebrates," by Charles C. Adams, *Bull. Illinois State Lab. of Nat. Hist.*, Vol. 11, Art. 2. Urbana, 1915. [The paper was reviewed in the February *Review*, pp. 166-167.]

*Western States*

DARTON, N. H., AND OTHERS. **Guidebook of the Western United States. Part C: The Santa Fe Route, with a Side Trip to the Grand Canyon of the Colorado.** iv and 194 pp. Maps, ills. *U. S. Geol. Surv. Bull. 613.* Washington, 1915. \$1.

This is the second of the U. S. Geological Survey's four transcontinental guides, two of which have already been reviewed (Northern Pacific route, Feb. *Review*, p. 153; Overland route, *Bull. Amer. Geogr. Soc.*, Sept., 1915, pp. 697-698.) Twenty-four maps on the scale of 1:500,000 represent continuous topography from Kansas City to Los Angeles. At least, it would be continuous topography did not the over-printing of geology in red on them greatly mar their legibility, which is a pity, indeed. The book is designed for the general traveler, who cannot be assumed to read topographic maps. But he is an intelligent person in this country and would quickly learn if given a fair chance. For the most part he will think he is given too much geology. All that helps to an understanding of topography, resources, or history, is good, and most of Darton's geology stands that test. Perhaps the animals of the remote past might have been spared. The text narrates the history of much of the exploration, settlement, and development of the region. It is concise, pointed, and well selected with regard to landmarks along the route. The book will make a trip over the Santa Fe more interesting than ever. The twenty-four maps alone, if freed of their red overprint, would be worth half the price of the volume.

MARK JEFFERSON.

ALLEN, G. F. **Forest Types in the Rainier National Park.** ills. *The Mountaineer*, Vol. 8, 1915, Dec., pp. 53-60. Seattle.

ALTER, J. C. **Weather Bureau Exhibit at San Francisco, 1915.** ills. *Monthly Weather Rev.*, Vol. 43, 1915, No. 9, pp. 452-454.

BAKER, C. C. **Mexican Land Grants in California.** *Ann. Publs. Hist. Soc. of So. California*, Vol. 9, Part 3, pp. 236-243. Los Angeles, 1914. [See note with same title in the March *Review*, p. 219.]

BAKER, C. C. **The Rise and Fall of the City of Gladstone.** *Ann. Publs. Hist. Soc. of So. California*, Vol. 9, Part 3, pp. 188-194. Los Angeles, 1914. [See note with same title under "Geographical Record" in this number, p. 297.]

BEAL, C. H. **The Earthquake in the Imperial Valley, California, June 22, 1915.** Maps, ills. *Bull. Seismolog. Soc. of Amer.*, Vol. 5, 1915, No. 3, pp. 130-149. [Abstracted in the Feb. *Review*, pp. 142-143.]

CLELAND, R. G. **The First Expedition of Jedidiah S. Smith to California.** *Ann. Publs. Hist. Soc. of So. California*, Vol. 9, Part 3, pp. 200-203. Los Angeles, 1914.

COLE, MRS. CORNELIUS. **To California via Panama in 1852.** *Ann. Publs. Hist. Soc. of So. California*, Vol. 9, Part 3, pp. 163-172. Los Angeles, 1914.

DANIELS, MARK. **The Sequoia National Park.** Ills. *Amer. Forestry*, No. 265, Vol. 22, 1916, pp. 12-21. [Excellent photographs.]

DAVIS, E. F. **The Earthquakes of October 7, 1915, in Central California.** Map, diagrs. *Bull. Seismolog. Soc. of America*, Vol. 5, 1915, No. 4, pp. 230-235.

DILLER, J. S. **Mount Shasta: Some of Its Geologic Aspects.** Maps, ill. *Mazama*, Vol. 4, 1915, No. 4, pp. 11-16. Portland, Ore.

HARDESTY, W. P. **Physical-Geography of Mount Shasta Region.** Ills. *Mazama*, Vol. 4, 1915, No. 4, pp. 17-18. Portland, Ore.

HOUSTON, D. F. **The National Forests.** Ills. *Amer. Forestry*, No. 267, Vol. 22, 1916, pp. 153-157.

JONES, J. C. **The Pleasant Valley, Nevada, Earthquake of October 2, 1915.** Maps, diagr., ill. *Bull. Seismolog. Soc. of America*, Vol. 5, 1915, No. 4, pp. 190-205.

MATTHES, F. E. **The Survey of Mount Rainier.** Diagrs., ill. *The Mountaineer*, Vol. 8, 1915, Dec., pp. 61-66. Seattle.

McKEE, R. H. **The Glaciers of Mount Rainier in Comparison With Other Well-Known Systems of Glaciers.** Ills., bibliogr. *The Mountaineer*, Vol. 8, 1915, Dec., pp. 73-74. Seattle.

MONNET, PAUL. **Le Grand Désert américain.** *La Géogr.*, Vol. 30, 1914-15, No. 5, pp. 408-411. Paris. [The author infelicitously revives the long-since discarded term of "Great American Desert" to designate the arid and semi-arid regions of the Cordillera.]

— **Mount Rainier National Park Number.** 118 pp. Map, diagrs., ill. *The Mountaineer*, Vol. 8, 1915, Dec. Seattle. [Individual articles of geographic interest listed above.]

— **Portland, Oregon, Consular District of (Comprising the States of Oregon, Washington, Idaho and Montana, and the Territory of Alaska), Trade of the, Report for the Year 1914 on the.** 80 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5540. London, 1915.

SAUNDERS, E. J. **The Geological Story of Mount Rainier.** Diagr., ill. *The Mountaineer*, Vol. 8, 1915, Dec., pp. 67-72. Seattle.

WILCOX, W. F. **San Miguel River Canyon Flume—A Monument of Gold Mining Failure.** Ills. *Sci. Amer.*, Vol. 114, 1916, Jan. 29, No. 5, p. 123. [In western Colorado, near the Utah line.]

WOOD, H. O. **On a Possible Causal Mechanism for Heave-Fault Slipping in the California Coast Range Region.** Diagrs. *Bull. Seismolog. Soc. of America*, Vol. 5, 1915, No. 4, 214-229.

Panoramic view of the Rocky Mountain National Park, Colorado. 1:125,000. Department of the Interior, [Washington], [1915?].

Panoramic view of the Mesa Verde National Park, Colorado. 1:45,000. Department of the Interior, [Washington], [1915].

#### MEXICO AND CENTRAL AMERICA

BASCHIN, O. **Schweizerische Expedition nach der Mexikanischen Halbinsel Niederkalifornien.** *Die Naturwissenschaften*, Vol. 4, 1915, No. 53, pp. 723-724. [Abstract of a lecture by Arnold Heim on Lower California before the Berlin Geographical Society on Dec. 4, 1915.]

FLORES, T. **El mercurio en Mexico.** *Bol. Minero*, Vol. 1, 1916, No. 1, pp. 13-14. Depart. de Minas, Direcc. de Minas y Petroleo, Secr. de Fomento, Colon. e Industr., Mexico.

FRANK, J. C. **American Interoceanic Canals: A List of Works in the New York Public Library.** *Bull. New York Public Library*, Vol. 20, 1916, No. 1, pp. 11-81.

HAM, C. D. **Americanizing Nicaragua.** Map, ill. *Amer. Review of Reviews*, Vol. 53, 1916, No. 2, pp. 185-191.

HUEBNER, G. G. **Economic Aspects of the Panama Canal.** *Amer. Econ. Rev.*, Vol. 5, 1915, No. 4, pp. 816-829.

LANDA, LUIS. **Present Condition of Meteorology and Seismology in Honduras.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 610. [Author's abstract of a paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916.]

ORDÓÑEZ, E. **Las principales unidades geográficas mexicanas y la distribución de los criaderos minerales.** *Bol. Minero*, Vol. 1, 1916, No. 2, pp. 55-57. Depart. de

Minas, Direcc. de Minas y Petroleo, Secr. de Fomento, Colon. e Industr., Mexico. [A general statement of the geographical provinces of Mexico preliminary to a discussion, to be subsequently published, of the regional distribution of the mineral deposits. The author urges the restriction of the term "Mesa Central" to the southern portion of the Mexican plateau, which he would divide into two parts: (1) the "Mesa Central," or Plateau of Anahuac, and (2) the "Gran Cuenca Mexicana," or the Great Basin region of northern Mexico, characterized by bolsons, interior drainage, and aridity.]

— **Panama, L'obstruction du canal de.** Ills. *La Nature*, No. 2207, 1916, Jan. 15, pp. 47-48.

SLOSSON, E. E. **Lower California: Why We Need It and It Needs Us.** Map. *The Independent*, No. 3506, Vol. 85, 1916, pp. 227-228.

— **Yucatan, Estado de, Boletín mensual de la Sección Meteorológica del: Año meteorológico de 1915 á 1916, mes de Julio de 1915, pp. 755-794; mes de Agosto de 1915, pp. 795-836.** Merida de Yucatan, Mexico, 1915.

## SOUTH AMERICA

### GENERAL

BOWMAN, ISAIAH. **South America: A Geography Reader.** xxii and 354 pp. Maps, ill., index. Rand, McNally & Co., Chicago, 1915. 75 cents. 7 x 5.

There is no mistaking the keynote of this little book as *human*. Throughout it admirably exemplifies the relations between man and nature. The reviewer does not know whether the school children it was written for will like it, but it is just what he wants for one of his classes, as it really pictures South American life. The material is excellently chosen and well illustrated: characteristic aspects of life and not merely strange ones are described, and the pictures belong to the argument instead of hailing from the office scrapbook. The best ones, of course, are the author's own, and the best part of the book is that which deals with the arid west he has known in person. The author oddly begins at the southern tip of the continent and works northward to Patagonia. To the reviewer's taste the Argentine Republic is undertreated. In culture and commerce it now leads the continent by a lead that is absolute, regardless of size or population, and 36 pages are not adequate—10 per cent of the volume. From the viewpoint of geographic interest the author is perhaps justified.

The maps, with the exception of an original vegetation map of the continent, are publisher-made. That facing page 202, where the Xingú River is the topic, has the river, but without the name on it. Peons are not so wholly badly off as represented, and has not Denis told us that the rubber gatherers were mainly not Indians but Ceará men?

MARK JEFFERSON.

— **Latin America in 1915: A Review of the Financial, Commercial, Political, and Economic Progress of the Latin-American Republics of Argentina, Brazil, Chile, Uruguay, Mexico, Peru, etc., in 1915.** *South American Journ.*, Vol. 80, 1916, No. 2, pp. 23-54, *passim*. London.

— **Lima-Buenos Ayres by Rail.** *South American Journ.*, Vol. 70, 1916, No. 3, p. 66. [This topic was discussed in the *Jan. Review*, p. 53.]

WAGNER, E. R. **De Santiago del Estero à Rio de Janeiro par le Gran Chaco, le haut Parana, et les colonies allemandes: L'expansion allemande et l'avenir français dans l'Amérique du sud.** Map. *La Géogr.*, Vol. 30, 1914-15, No. 5, pp. 394-404. Paris. [Abstract of a lecture before the Paris Geographical Society on June 11, 1915. The lecture was to be published in full in *La Revue*.]

Traders' map of South America, compiled from official maps of the several South American republics and other authoritative sources of information. 1:5,400,000. General Drafting Co., New York, 1915.

### ECUADOR, PERU, BOLIVIA

HANN, J[ULIUS] VON. **Temperaturverhältnisse von Quito.** Diagr. *Meteorol. Zeitschr.*, Vol. 32, 1915, No. 2, pp. 488-500.

— **La Quiaca-Tupiza: Rival to Panama Canal.** Map, ill. *Bull. Pan American Union*, Vol. 41, 1915-16, No. 6, pp. 820-835. [Work has been commenced on this projected line of about 60 miles that will link up the east and west railroad systems of South America via Bolivia.]

LURQUIN, CONSTANT. **Contribución geográfica al progreso de Bolivia: Servicio oficial de la hora en la República; su utilidad práctica i su significación científica.** *Bol. Soc. Geogr. Sucre*, No. 179-181, Vol. 16, 1915, pp. 141-164. [A discussion of the projected adoption of Greenwich time as the standard for Bolivia.]

LURQUIN, CONSTANT. **Bolivian Meteorology.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 610. [Author's abstract of a paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916.]

NORDENSKIÖLD, ERLAND. **Die religiösen Vorstellungen der Itonama-Indianer in Bolivia.** *Zeitschr. für Ethnol.*, Vol. 47, 1915, No. 2-3, pp. 105-113. Berlin.

Mapa del Perú por la Sociedad Geográfica de Lima, dibujado por Camilo Vallejos Z, cartógrafo de la Sociedad. 1:1,500,000. Editado por la Librería e Imprenta Gil, Lima, 1912.

#### BRAZIL

BELTRAN Y ROZPIDE, RICARDO. **El Río de los Aripuanas (Roosevelt, Teodoro, Castaña ó de la Duda).** *Rev. de Geogr. Colon. y Mercantil*, Vol. 12, 1915, No. 11-12, pp. 454-458. Real Soc. Geogr., Madrid. [This and the article in the same tenor by Captain Vasconcellos previously listed in the *Bull. Amer. Geogr. Soc.* for Nov., 1915 (p. 896), belittle Colonel Roosevelt's Brazilian expedition on the ground that the river explored was known to the Portuguese cartographers of the eighteenth century. However, their knowledge was restricted to its mouth—from which they naturally inferred the existence of a river—but this, no less than the fact that the rubber gatherers knew its lower course, does not invalidate the claim that the Roosevelt-Rondon expedition was the first to explore and instrumentally survey its whole course.]

DA CUNHA, A. P. **Determinação de coordenadas geographicas no estado do Ceará.** xviii and 171 pp. Map, diagrs., index. *Inspeccia de Obras contra as Seccas Publ. No. 27.* Rio de Janeiro, 1914.

MATTOS, J. N. B. **Dados climatologicos do anno de 1911.** 30 pp. Maps. *Serviço Meteorol. do Estado de São Paulo Bols. Nos. 21-24, Ser. II.*

MILLER, B. LER., AND J. T. SINGEWALD, JR. **The World's Deepest Mine.** Diagrs., ill. *Bull. Pan American Union*, Vol. 41, 1915-16, No. 6, pp. 805-819. [Morro Velho, in the gold belt of Brazil.]

Esboço do carta pluviometrica da região semi arida do Brasil, por H. E. Williams e Roderic Crandall. 1:3,000,000. *Inspeccia de Obras contra as Seccas*, Minist. da Viação e Obras Publicas, [Rio de Janeiro], 1910.

Mappa parcial do estado da Bahia, pelo engenheiro Roberto Miller. 1:500,000. *Inspeccia de Obras contra as Seccas*, Minist. da Viação e Obras Publicas, [Rio de Janeiro], 1913.

Mappa dos estados do Ceará, Rio Grande do Norte e Parahyba, com parte dos estados limitrophes pelo . . . H. E. Williams e Roderic Crandall. 1:1,000,000. *Inspeccia de Obras contra as Seccas*, Minist. da Viação e Obras Publicas, [Rio de Janeiro], 1910.

Mappa do estado da Parahyba. 1:500,000. *Inspeccia de Obras contra as Seccas*, Minist. da Viação e Obras Publicas, [Rio de Janeiro], 1913.

Mappa de parte dos estados de Pernambuco, Piauh y Bahia, [pelo] engenheiro Roberto Miller. 1:500,000. *Inspeccia de Obras contra as Seccas*, Minist. da Viação e Obras Publicas, [Rio de Janeiro], 1913.

Mappa parcial do estado do Piauh y, pelo engenheiro H. L. Small. 1:1,000,000. *Inspeccia de Obras contra as Seccas*, Minist. da Viação e Obras Publicas, [Rio de Janeiro], 1914.

Mappa geologico da parte norte e central do estado do Piauh y e adjacencias, pelo engenheiro Horatio L. Small. 1:1,000,000. Accompanies "Geologia e supprimento d'agua subterranea no Piauh y e parte do Ceará," by H. L. Small, *Inspeccia de Obras contra as Seccas Publ. No. 32.* Rio de Janeiro, 1914. [The text was listed in the February *Review*, p. 154.]

Mappa do estado de Sergipe e da parte nordeste do estado da Bahia, pelo engenheiro R. H. Sopper. 1:1,000,000. *Inspeccia de Obras contra as Seccas*, Minist. da Viação e Obras Publicas, [Rio de Janeiro], 1914.

Mappa geologico do estado de Sergipe e da parte nordeste do estado da Bahia, pelo engenheiro R. H. Sopper. 1:1,000,000. Accompanies "Geologia e supprimento d'agua subterranea em Sergipe e no nordeste da Bahia," by R. H. Sopper, *Inspeccia de Obras contra as Seccas Publ. No. 34.* Rio de Janeiro, 1914. [The text was listed in the February *Review*, p. 154.]

## EUROPE

## BRITISH ISLES

INNES, A. D. **A History of England and the British Empire.** Vol. 1: **Before the English Came, to 1845.** xxxiii and 539 pp. Vol. 2: **1485-1688.** xxxi and 553 pp. Vol. 3: **1689-1802.** xxvi and 550 pp. Vol. 4: **1802-1914.** xxxv and 604 pp. Maps and index in each. The Macmillan Co., New York, 1913, 1914, 1915. \$1.60 each. 8 x 5½.

The amount of space assigned to the work required a high power of condensation, and in this the writer excels, giving in general quite clear descriptions of intricate matters in the fewest possible words. The work is largely taken up with the dynastic politics and wars of the country. The accounts of these matters are remarkably well done, and from the short and plain descriptions of military strategy and battle tactics on sea and land, the general reader, with the help of the well-drawn battle plans, may easily form a good idea of the military and naval movements. At the close of each volume there are well-written chapters on the manners and customs of the period dealt with, the time-spirit, and the growth of its political, economic, social, educational, financial, and commercial institutions. The geographical factor in the historical product is recognized and somewhat developed, in differentiating the medieval from the modern period; but it might have been shown with advantage, the British Empire being an island empire, that islands in general are relatively restricted in area and that hence an island-dwelling nation, as it expands and increases, finally is unable to derive from its native habitat sufficient food to support its population and so is forced to draw food supplies from without and, to safeguard these in time of war, is obliged to have food-producing colonies and a merchant marine to carry its food supplies and a strong navy to protect them from the depredations of enemies. Consequently the geographical factor is an all-important element in the evolution of the British Empire.

DAVID H. BUEL.

MOSS, C. E. **Vegetation of the Peak District.** x and 235 pp. Maps, ill., index. University Press, Cambridge (G. P. Putnam's Sons, New York), 1913.

The survey of the vegetation of Great Britain which is being carried on by members of the British Ecological Society has received a notable contribution in Doctor Moss's volume. The region which he has studied embraces the southern Pennine uplands, covering portions of four counties in one of the most elevated parts of England. The plant associations of this region are described in great fullness, their relation to each other is demonstrated, and the influence of underlying rock in determining their character is particularly well worked out. The woodland, scrub, grassland, and moor of today represent almost entirely areas which were formerly forested. The types of woodland and grassland are quite distinct on siliceous and on calcareous soils, oak and nardus being predominant on the former and ash and fescue grass on the latter. Two detailed maps show the distribution of the plant associations and also the extent of cultivation of wheat and oats; many exceptionally fine illustrations portray typical plant communities. This well-digested and carefully presented work constitutes one of the best pieces of recent European vegetational investigation.

FORREST SHREVE.

FLEMING, RUFUS. **Scotland.** 11 pp. *Suppl. to Commerce Repts.*, Ann. Series, 1915, No. 190. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

HOLST, N. O. **The Ice Age in England.** *Geol. Magazine*, Sixth Decade, Vol. 2, 1915, No. 9, pp. 418-424; No. 10, pp. 434-444; No. 11, pp. 504-513.

— **Rainfall in 1915, British.** *Nature*, No. 2412, Vol. 96, 1916, Jan. 20, p. 576.

SHAW, W. N. **Organization of the Meteorological Office in London.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 9, pp. 449-452. [Reprinted from the "Tenth Annual Report of the Meteorological Committee for the Year Ended 31 March, 1915," pp. 65-74.]

Distribution of vegetation in the Peak District, by C. E. Moss. 1:63,360. Accompanies "Vegetation of the Peak District," by C. E. Moss, Cambridge University Press, Cambridge, 1913. [Book reviewed above.]

Philips' Comparative Series of Wall Atlases: British Isles, edited by J. F. Unstead and E. G. R. Taylor, with explanatory handbook for teachers. 8 maps: 1, relief of land; 2, political; 3 and 4, climate; 5, geological; 6, agriculture and fishing; 7, industrial; 8, density of population. [Maps 2, 3, 4, 5, 6, and 8 in 1:1,000,000, 1 in 1:1,500,000, and 7 in 1:750,000.] George Philip & Son, Ltd., London, 1914. [The excellence of this series, which systematically represents all phases of the geography of a region, has been dwelt



upon before (*Bull. Amer. Geogr. Soc.*, Vol. 44, 1912, p. 640). The larger scale of the present set, as compared with the continental maps constituting the remainder of the series, permits of a more intimate treatment.]

Thames valley rainfall, November, 1915. 1:1,267,200. Accompanies, opp. p. 183, *Symons's Meteorol. Mag.*, No. 599, Vol. 50, December, 1915.

## SCANDINAVIA, INCLUDING FINLAND

KEY, HELMER. *La vie économique de la Suède*. 166 pp. Plon-Nourrit et Cie, Paris, 1913. 10 x 6½.

The author presents a carefully digested summation of the social and industrial statistics of Sweden for the first decade of the century and from this base produces a shrewd analysis of the economic situation and forecast of its movement upward in progress. In this we note an omission common to most such treatises on the wealth of any nation, the index of national prosperity exhibited by the movement of population. No state can be said to strike an even or a favorable balance of the common weal when the balance is reached by means of the loss of any considerable mass of its producing population. Some reference should have been made to the considerable loss of Sweden's excellent citizenship which would be under no impulse to come to this country if conditions at home gave promise of prosperity to the individual of ambition.

WILLIAM CHURCHILL.

READE, ARTHUR. *Finland and the Finns*. xi and 315 pp. Map, ills., index. Dodd, Mead & Co., New York, 1915. \$3.00. 9 x 6.

An excellent handbook on Finland, by an English resident (lecturer in English at the University of Helsingfors). The introductory chapter deals with the history, geology, geography, ethnology, and language of Finland. Then follow descriptions of the national movement, the racial struggle, life in town and country, manners, customs, and beliefs. A good idea is given of the Finnish epic Kalevala (Hero-land), with an extended account of Finnish literature, and music. Other topics discussed are education, politics, industry, the labor movement, female suffrage, the position of Finland in the Russian Empire and the process of making Finland a province of Russia.

DAVID H. BUEL.

— Finland, *Befolkningsrörelsen i åren 1911 och 1912: Befolkningsstatistik*. 209 pp. *Bidrag till Finlands Officiella Statistik No. 46*. Helsingfors, 1915. [Vital statistics of the population. Captions in Swedish and French.]

— Finland, *Statistisk Årsbok för, Ny Serie, Tofte Årgången, 1914*. xxviii and 649 pp. Map. Utgifven af Statistiska Centralbyrån, Helsingfors, 1915. 9½ x 7. [Statistical matter giving revision of 1910 census figures. Data relating to population, agriculture, and colonization are important.]

— Finlands folkmängd den 31 December 1910 (enligt församlingarnas kyrkoböcker): *Befolkningsstatistik*. Vol. 1: *Folkmängden samt befolkningens fördelning efter kön, ålder, civilstånd, språk, trosbekännelse, bildningsgrad och födelseort åfvensom den franvarande befolkningens fördelning efter vistelseort*. 321 pp. *Bidrag till Finlands Officiella Statistik No. 45*. Helsingfors, 1915. [Census of Finland for 1910. Size of population and distribution according to sex, age, occupation, language, creed, education, origin, etc.]

FLODSTRÖM, I. *Till fragan om rasskillnader inom Sveriges befolkning*. Map. *Ymer*, Vol. 35, 1915, No. 3, pp. 213-266. [Racial composition of the population of Sweden.]

FOGHT, H. W. *Rural Denmark and Its Schools*. xi and 355 pp. Map, diagrs., ills., index, bibliogr. The Macmillan Co., New York, 1915. \$1.40. 7½ x 5.

GAARDER, TORBJØRN. *Surstoffet i fjordene (De vestlandske fjordes hydrografi, I)*. 200 pp. Diagrs., ills., bibliogr. *Bergens Museums Aarbok, 1915-1916: Naturvidensk. Række*, No. 1, Art. 2. [The oxygen content of the waters of the Norwegian fjords and its bearing on marine life. Detailed examination of the fjords near Bergen.]

GUINCHARD, J., edit. *Sweden: Historical and Statistical Handbook*. [Issued] by order of the Swedish Government. 2nd edition, English issue. Vol. 1: *Land and People*. xxvi and 781 pp. Vol. 2: *Industries*. xi and 759 pp. Maps, ills., index. P. A. Norstedt & Söner, Stockholm, 1914. 9½ x 6½. [Excellent handbook of the economic and cultural life of Sweden. German edition reviewed in *Bull. Amer. Geogr. Soc.*, Vol. 47, 1915, pp. 786-787.]

HARRIS, E. L. *Sweden*. 8 pp. *Suppl. to Commerce Repts.*, Ann. Series, 1915, No. 16c. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C. [Geographic location is responsible for Sweden's commercial importance during

the present war. Businesses prospering considerably include banking—much money has passed between Germany and Russia on account of prisoners of war—and shipping.]

— **Hydrografiska byrån Årsbok 5 för år 1913.** 263 pp. Maps, diagrs. Stockholm, 1915. [Contains small maps of Sweden showing the following: rainfall, monthly and annual for 1913; accumulated snowfall on the first of each month from Oct. 1, 1912, to May 1, 1913; duration of snow-cover during that winter; date of freezing and opening of lakes in the autumn of 1912 and spring of 1913; duration of freezing temperature in days.]

— **Järnvägar, Statens, av Kungl. Järnvägsstyrelsen: År 1914.** 236 pp. Maps, diagrs., ills. *Sverges Officiella Statistik*, Stockholm, 1915. [Accompanied by a map of southern Sweden, and one of the rest of the country, both 1:2,000,000, showing in color the ownership, gage, and stage of construction of its railroads.]

— **Järnvägsstatistik, Allmän, av Kungl. Järnvägsstyrelsen: År 1913.** vii and 107 pp. Maps. *Sverges Officiella Statistik*, Stockholm, 1915. [Accompanied by similar maps to those of the 1914 edition, listed immediately above.]

KOLDERUP, C. F. **Jordskjælv i Norge i 1913.** 18 pp. Maps. *Bergens Museums Aarbok 1914-1915: Avhandlingar og Aarsberetning*, No. 3, Art. 16. [Earthquakes in Norway during 1913. Summary in German.]

KOLDERUP, C. F. **Jordskjælv i Norge i 1914.** 11 pp. Map. *Bergens Museums Aarbok 1914-1915: Avhandlingar og Aarsberetning*, No. 3, Art. 17. [Summary in German.]

— **Norway, Trade and Commerce of, Report (Supplementary), for the Year 1913 on the.** 16 pp. *Diplomatic and Consular Reports*, Ann. Series, No. 5534. London, 1915.

OXAAL, JOHN. **Traenlandet.** Maps, diagrs., ills. *Norske Geogr. Selskaps Aarbok*, Vol. 25, 1913-1914, pp. 55-101. [A discussion of the effect of marine erosion and glaciation on the rock structure of an archipelago off the Norwegian coast at the Arctic Circle. A colored map, 1:400,000, showing the hypsometry and bathymetry of the Norwegian coast between 67° and 66° N. accompanies the paper.]

RABOT, CHARLES. **Le guerre et l'élevage du renne en Laponie.** Ills. *La Nature*, No. 2207, 1916, Jan. 15, pp. 39-42.

Topografisk kort over kongeriket Norge. 1:100,000. Sheets: 9C, Skien; 15C, Fet; 26A, Hamar. Norges Geografiske Opmaalning, [Christiania], 1914.

Landgeneralkart over Norge. 1:250,000. Blad LV, Kristiania. Norges Geografiske Opmaalning, [Christiania], 1915.

#### AUSTRIA-HUNGARY

AMPFERER, OTTO. **Verteidigung des interglazialen Alters der Höttinger Breccie.** *Petermanns Mitt.*, Vol. 61, 1915, Sept., pp. 336-338. [The age of the Höttinger breccia, which caps a limestone range north of Innsbruck, is a matter of controversy among German geologists.]

BASCHIN, O. **Die österreichisch-ungarischen Küstenländer.** *Die Naturwissenschaften*, Vol. 3, 1915, No. 45, pp. 611-612. [Summary of a lecture by N. Krebs before the Berlin Geogr. Society, Oct. 9, 1915.]

GIGANTE, SILVINO. **A Velenceiek Fiuméban.** *A Tenger*, Vol. 5, 1915, No. 11-12, pp. 349-359. Hungarian Adriatic Assoc., Budapest. [On the Venetians in Fiume.]

PFAUNDLER, R. v. **Österreichisch-italienische Grenzfragen.** Map. *Petermanns Mitt.*, Vol. 61, 1915, June, pp. 217-223. [The map accompanying this article is omitted from the copies of the journal sent outside of Germany, says a publisher's statement, and will be supplied after the war.]

PFAUNDLER, R. v. **Österreichisch-italienische Grenzfragen: [Nachtrag auf Grund des neuen österreichischen Rotbuches].** Map. *Petermanns Mitt.*, Vol. 61, 1915, Sept., pp. 333-335. [The map accompanying the same author's article in the June number of *Petermanns Mitt.*, listed above, serves as an illustration for this one also.]

RAVANI, LUIGI. **Pelagosa.** Bibliogr. *La Geogr.*, Vol. 3, 1915, No. 7-10, pp. 313-319. Novara. [Pelagosa, in Austrian possession, is one of a bridge of islands between the Dalmatian and Italian coasts.]

WALLNER, JULIUS. **Beiträge zur Geschichte des Fischereiwesens in der Steiermark: Das Gebiet der Mur.** *Archiv für Fischereigeschichte*, 1915, April, No. 5, pp. 47-103; Oct., No. 6, pp. 55-156. Berlin.

## BALKAN STATES, INCLUDING RUMANIA

WACE, A. J. B., AND M. S. THOMPSON. **The Nomads of the Balkans: An Account of the Life and Customs Among the Vlachs of Northern Pindus.** x and 332 pp. Ills., index. E. P. Dutton & Co., New York, 1913. \$5. 9 x 6.

This study has neither literary form, imagination, nor unique data to hold one to its reading. There is no reason why ethnic data should not be presented in an interesting manner. The authors spent the summers of 1910 and 1911 among the Vlachs, the nomads of the Balkans; so they did not lack knowledge, but they failed to present "human interest."

The Vlachs are scattered in limited bands over their native lands. They are pastoral rather than agricultural and spend their winters with their flocks and herds on the plains, returning to their mountain villages with the green pastures of spring. They extend in isolated areas from the Adriatic to the Aegean Sea. Near the Adriatic they are found from Durazzo in the north to Avlona in Albania in the south. They extend intermittently eastward over Greece, northward over southern Serbia, and still farther north-eastward into Bulgaria. Undoubtedly Vlachs are today in arms in all those countries. Their young men have been migrating to the United States in considerable numbers since 1908.

The most interesting thing brought out by the authors is the origin and history of the Vlachs. The people call themselves "Aromuni," or Romans. Their language, both in vocabulary and structure, is undeveloped Latin. Now, who are the Vlachs—descendants of Roman colonists, or Romanized tribes of the Balkan area? As early as the sixth century A.D. Procopius recorded a list of fortified Balkan towns having Vlach names, though the language was not written until the eighteenth century. About 976 A.D. the Vlachs were again spoken of in written history; near the close of the twelfth century they came into prominence. In 1192 they routed the Byzantine army and nearly captured the Emperor. From 1196 until 1207 Johanizza was sole king of the Vlachs and the Bulgarians; the Greeks were his allies. Two neighboring Vlachian kingdoms flourished until the fourteenth century. Great Vlachia ceased to exist in 1308, and Little Vlachia was conquered by the Serbians in 1350. Since that date the scattered Vlachs have lived among the various dominating nations which have held their territory. They are only slowly being amalgamated and assimilated. It is believed that the Vlachs are mainly "the descendants of Romanized hill tribes rather than of actual Roman colonists, who would long since have been absorbed by the other town-dwelling races, and in particular the Greeks"—who everywhere in the Near East, where Roman and Greek have met, have absorbed the Roman.

A. E. JENKS.

— **Cyclades, Trade and Commerce of the, Report for the Year 1914 on the.** 21 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5537. London, 1915.

TEDESCHI, E. C. **L'espansione economica italiana in Balcania.** *Riv. Coloniale*, Vol. 10, 1915, No. 6, pp. 305-315. Rome.

WEISS-BARTENSTEIN, W. K. **Bulgariens Handelsbeziehungen zu seinen Nachbarstaaten.** *Weltwirtschaft*, Vol. 5, 1915, No. 9, pp. 184-187. Berlin.

Sketch map of the southern Balkans [showing] principal Vlach areas. 1:2,050,000. Accompanies, opp. p. 206, "The Nomads of the Balkans," by A. J. B. Wace and M. S. Thompson, E. P. Dutton & Co., New York, [1913]. [Book reviewed above.]

## SPAIN, PORTUGAL

BECERRA, L. L. **Osma: Monografía geográfica.** *Bol. Real Soc. Geogr.*, Vol. 12, 1915, No. 10, pp. 377-400. Madrid. [Osma is an old Moorish town in north-central Spain in the province of Soria.]

BUEN, ODÓN DE. **El valle del Lozoya: Extracto de la monografía geológica publicada por D. Lucas Fernández Navarro.** *Rev. de Geogr. Colon. y Mercantil*, Vol. 12, 1915, No. 11-12, pp. 459-463. Real Soc. Geogr., Madrid.

CHICO Y RELLO, PEDRO. **Zamarramala: Monografía geográfica.** Map, ills., bibliogr. *Bol. Real Soc. Geogr.*, Vol. 12, 1915, No. 9, pp. 337-361. Madrid. [Zamarramala is a small town near Segovia.]

— **Corunna, now Vigo, Consular District of (Comprising the Provinces of the Asturias, Leon, and Galicia), Trade and Industries of the, Report for the Year 1914 on the.** 42 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5563. London, 1916.

— **Lisbon, Consular District of, Trade of the, Report for the Year 1914 on the.** 28 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5514. London, 1915.

— **Oporto, Consular District of, Trade of the, Report for the Year 1914 on the.** Map. 17 pp. *Diplomatic and Consular Repts.*, Ann. Series, No. 5536. London, 1915.

SPRAGUE, R. L. **Gibraltar.** 6 pp. *Suppl. to Commerce Repts.*, Ann. Series, 1915, No. 20a. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

Mapa Militar Itinerario de España, 1:200,000: Hojas 24, 39 and 94. Depósito de la Guerra, [Madrid], 1914 and 1915.

[Province of] Ávila. 1:425,000. Alberto Martin, Editor, Barcelona, [1915].

[Province of] Granada. 1:500,000. Alberto Martin, Editor, Barcelona, [1916].

[Province of] Lugo. 1:400,000. Alberto Martin, Editor, Barcelona, 1915.

[Province of] Madrid. 1:400,000. Alberto Martin, Editor, Barcelona, [1915].

[Province of] Santander. 1:350,000. Alberto Martin, Editor, Barcelona, [1915].

[Province of] Sevilla. 1:500,000. Alberto Martin, Editor, Barcelona, [1915].

Plano de Almería, revisado por el Ayuntamiento y facilitado por D. Gabriel Pradal Ruiz. 1:7,500. Alberto Martin, Editor, Barcelona, [1916].

Plano de Málaga, revisado por el Ayuntamiento y corregido por Manuel Zafazár. 1:7,500. Alberto Martin, Editor, Barcelona, [1915].

Plano de Murcia, facilitado por D. Pedro García Faria. Revisado por el Ayuntamiento. 1:5,000. Alberto Martin, Editor, Barcelona, [1915].

Plano de Pamplona, facilitado y revisado por el Ayuntamiento. 1:4,500. A. Martin, Editor, Barcelona, 1915.

## AFRICA

### ATLAS REGION

BLAKE, MAXWELL. **Morocco.** 5 pp. *Suppl. to Commerce Repts.*, Ann. Series, 1915, No. 75a. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

CAMBON, VICTOR. **Les grands travaux au Maroc et l'Exposition de Casablanca.** Map, ills. *La Nature*, No. 2208, 1916, Jan. 22, pp. 49-53. [French development of Morocco since the war began.]

KEMP, E. C. **Tunis.** 4 pp. *Suppl. to Commerce Repts.*, Ann. Series, 1915, No. 79c. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

ONTIVEROS, J. G. **El distrito consular de Mazagán: Reformas y modificaciones de que ha sido objeto desde 1912.** *Rev. de Geogr. Colon. y Mercantil*, Vol. 12, 1915, No. 11-12, pp. 421-453. Real Soc. Geogr., Madrid. [Spanish consular report dealing with commercial reforms introduced by the French régime in Morocco.]

— **Tangier, Consular District of, Trade of the, Report for the Year 1913 on the.** 56 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5559. London, 1916. [The prospective internationalization of Tangier improved trade by bringing thither an influx of money and Europeans, though fighting in the adjacent Spanish zone cut off much interior trade. Tangier was spared attack because—it is said—the most powerful hill tribe receive their supplies from it and declared it sacred.]

### SUDAN AND UPPER GUINEA

AYMERICH, GÉNÉRAL. **La conquête du Cameroun.** *L'Afrique Française*, Vol. 25, 1915, No. 10-12, pp. 309-315. [Contains material of geographic interest.]

F., J. **La conquête du Cameroun septentrional.** Map, diagr., ills. *L'Afrique Française*, Vol. 25, 1915, No. 10-12, pp. 279-289. [Contains material of geographic interest.]

— **Guinea, Spanish Possessions in the Gulf of, Trade of the, Report for the Year 1914 on the.** 9 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5519. London, 1915.

HUBERT, HENRY. **Les séismes en Afrique occidentale française.** Map. *La Géogr.*, Vol. 30, 1914-15, No. 5, pp. 359-364. Paris.

JOSEPH, GASTON. **Villes d'Afrique: Bondoukou.** *Renseign. Colon. (Suppl. à l'Afrique Franç.)*, 1915, No. 10-12, pp. 202-206. [Bondoukou lies in the French Ivory Coast near the boundary of the British Gold Coast colony.]

MARTIN, CAMILLE. **Togo et Cameroun: Formation et composition territoriales.** Maps. *Renseign. Colon. (Suppl. à l'Afrique Franç.)*, 1915, No. 10-12, pp. 177-202. [Summary of the physical and economic geography.]

WESTERMANN, DIEDRICH. **Vier Monate in Liberia: Ein Besuch in Boporu und Medina.** *Kolon. Rundschau*, 1915, No. 11-12, pp. 559-565. Berlin.

## EAST AFRICA

RAVA, MAURIZIO. **Al Lago Tsana (il mar profondo d'Etiopia): Relazione del viaggio compiuto dalla Missione Tancredi per incarico della Reale Società Geografica.** Con un'appendice di geografia agronomica del Cav. Giuseppe Ostini. viii and 270 pp. Maps, ills., index. Reale Società Geografica, Rome, 1913. Lire 5. 10 x 7.

A varied miscellany of travel is presented in this account of the Tancredi Mission to the heart of mountainous Abyssinia. The trip was undertaken under the auspices of the Royal Italian Geographical Society. Although this country has been the favorite tramping ground of Italian explorers in recent years, it was reserved for the author to accomplish the first circuit on land of the shore of Lake Tsana. A flowing narrative style takes the reader day by day along the successive stages of the journey. Two phases of observation appear to have attracted the author particularly. He dwells lengthily on the Abyssinians and their customs, as well as on the resources of their territory. Taken together, the pages of the book give a good idea of the belt of land extending immediately southwest of Eritrea to the sources of the Blue Nile. Its want of method, however, is the book's main defect. Systematic presentation might be expected, inasmuch as four years elapsed between the return of the expedition and the printing of the book.

An appendix by G. Ostini on the agricultural resources is an instructive summary of the economic conditions which prevail in the lowlands—once also lake-beds—surrounding the lake.

— **Uganda: Report for 1914-15.** 23 pp. Map. *Ann. Colonial Repts.*, No. 873. London, 1916.

## ASIA

## TURKEY IN ASIA, ARABIA, CAUCASIA, IRAN

WILD, L. H. **Geographic Influences in Old Testament Masterpieces.** xiii and 182 pp. Map, index. Ginn & Co., New York, 1915(?). \$1.00. 7½ x 5½.

This attractive little volume is a good example of the way in which the modern geographical viewpoint is gradually leavening all branches of human thought. In teaching her Bible classes Miss Wild found that a knowledge of geographic influences in Palestine was essential. She was impressed by the fact that scores of the finest Biblical passages are in a large measure geographical descriptions. Therefore she read the best books on the geography of Palestine and then boiled them down to fit her classes.

The first chapter is a condensed but clear picture of the main features of the country, brightly written and easy to grasp, but characterized by enthusiasm rather than by scientific accuracy. Then follow a series of chapters on the coast, the roads, the hills, the attractions of the plain, Mount Carmel and the rains, the thunderstorm psalm, and similar subjects. The chapter entitled "Naaman's Scorn of the Jordan" illustrates Miss Wild's method. She brings out the simple artlessness of the story, the sharp contrast between the clear Abana and the muddy Jordan, the unusualness of such a visit as that paid by Naaman to Elisha. Then she lets the Bible tell its own story, but the reader sees the geographical setting much better because of what has gone before. Each chapter is provided with half a dozen references to some of the best and most easily accessible books by scholars who have known the country at first hand.

ELLSWORTH HUNTINGTON.

— **Bahrain Islands, Trade of the, Report for the Year ending March 31, 1915, on the.** 26 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5555. London, 1916.

BAIKIE, JAMES. **The Cradle of Civilization: The Historic Lands Along the Euphrates and Tigris Rivers Where Briton Is Fighting Turk.** Ills. *Natl. Geogr. Mag.*, Vol. 29, 1916, No. 2, pp. 127-162.

BASCHIN, O. **Reisen im nördlichen Kleinasien.** *Die Naturwissenschaften*, Vol. 4, 1915, No. 50, pp. 670-672. [Abstract of a lecture by R. Leonhard before the Berlin Geographical Society, Nov. 6, 1915.]

CLAY, A. T. **Pushing Back History's Horizon: How the Pick and Shovel Are Revealing Civilizations That Were Ancient When Israel Was Young.** Map, ills. *Natl. Geogr. Mag.*, Vol. 29, 1916, No. 2, pp. 162-216. [Archeological research in Babylonia and Assyria; wealth of excellent photographs.]

CRUZET, V. **L'Arabie et le peuple arabe avant l'avènement du prophète Mohammed.** *Bull. de la Section Tunisienne, Soc. de Géogr. Comm. de Paris*, 1913-14, No. 4, pp. 122-166.

— **Economische toestanden in het Turksche Rijk.** *Tijdschr. voor Econ. Geogr.*, Vol. 6, 1915, No. 11, pp. 444-452. The Hague.

GEERE, H. V. **Lower Mesopotamia.** *United Empire*, Vol. 7, N. S., 1916, No. 1, pp. 16-26.

INDELLI, PAOLO. **La Cilicia (il Vilayet di Adana).** 79 pp. *Direz. Gen. degli Affari Commerciali [Publ.] No. 13.* Minist. degli Affari Esteri, Rome, 1915.

M[ARTEL], E. A. **Alexandrette et le chemin de fer de Bagdad.** Map, ills. *La Nature*, No. 2206, 1916, Jan. 8, pp. 31-32.

MICHELL, R. L. N. **Cyprus To-day.** *United Empire*, Vol. 7, N. S., 1916, No. 1, pp. 60-75. [Development of the island is bound up with agricultural reform; in the first place, with progress in irrigation.]

— **Seistan and Kain, Districts of, Trade of the, Report for the Year Ending March 20, 1914, on the.** 22 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5539. London, 1915.

[Five maps of Bible Lands]: 1, Composite map of Bible Lands and North America; 2, Physical and political map of Bible Lands; 3, History map of Bible Lands; 4, Palestine elevations; 5, Palestine towns. Each 8 x 12 in. Scribner's Sons, New York, 1915.

#### CHINA

— **Chefoo, Trade of, Report for the Year 1914 on the.** 13 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5547. London, 1915.

— **Hankow, Trade of, Report for the Year 1914 on the.** 12 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5551. London, 1916.

JAMESON, J. P. **The Newly Opened Commercial Port of Pukow.** *Commerce Repts.*, 1916, No. 13, pp. 218-219. Bureau of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C., 1916. [Abstracted in the *March Review*, p. 221.]

KINOSUKE, ADACHI. **China's Vast Resources: How Japan and America Can Co-operate to Aid in Chinese Development.** *Amer. Review of Reviews*, Vol. 53, 1916, No. 2, pp. 210-213.

LAUFER, BERTHOLD. **The Diamond: A Study in Chinese and Hellenistic Folk-Lore.** 75 pp., index. *Field Museum of Nat. Hist. Publ. 184 (Anthropol. Series, Vol. 15, No. 1).* Chicago, 1915. [A phase of the influence of Western civilization on the Far East in classical times.]

LEGENDRE, A. F. **Enquêtes économiques en Chine: Les grands ports de la Chine; Le chemin de fer du Yunnan.** *Bull. Soc. de Géogr. Comm. de Paris*, Vol. 37, 1915, No. 10-12, pp. 273-283.

— **Mengtzu, Trade of, Report for the Year 1914 on the.** 5 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5541. London, 1915.

SHERFESEE, W. F. **The Reforestation Movement in China.** ills. *Amer. Forestry*, No. 263, Vol. 21, 1915, Nov., pp. 1033-1040. [See abstract in the *Geographical Record* in this number under "Reforestation in China," pp. 301-302.]

SIMPSON, T. H. **Restoring China's Forests: A New American Influence in the Empire.** ills. *Amer. Review of Reviews*, Vol. 53, 1916, No. 3, pp. 337-340.

— **Trade, Returns of, and Trade Reports, 1914. Part 2: Port Trade Statistics and Reports. Vol. 4: Southern Coast Ports (Santua to Pakhoi).** pp. 885-1266. *China Maritime Customs, Statist. Series, Nos. 3 and 4.* Shanghai, 1915.

— **Tsinan and Tsingtau, Trade of, Report for the Year 1914 on the.** 6 pp. *Diplomatic and Consular Repts.*, Ann. Series, No. 5517. London, 1915. [The report is unstatistical, as no trade figures are available.]

— **Wuchow, Trade of, Report for the Year 1914 on the.** 11 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5499. London, 1915.

Plan of Chinkiang Harbour. 1:24,000. Accompanies "Yangtze Ports," being Vol. 2 of Part 2, *Port Trade Statistics and Reports*. Statistical Dept. of Inspector General of Customs, Shanghai, 1915.

## FARTHER INDIA, INCLUDING BURMA

BOVO, GOFFREDO. **Il commercio del Siam, dal 1° aprile 1914 al 31 marzo 1915.** 9 pp. *Direz. Gen. degli Affari Commerciali* [Publ.] No. 14. Minist. degli Affari Esteri, Rome, 1915.

BRIGGS, L. P. **French Indo-China.** 7 pp. *Suppl. to Commerce Repts.*, Ann. Series, 1915, No. 54e. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

DREIER, C. L. **Straits Settlements.** 8 pp. *Suppl. to Commerce Repts.*, Ann. Series, 1915, No. 56d. Bureau of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

MAURIZIO, PISCICELLI. **Nel Cambodge.** Ills. *Boll. Reale Soc. Geogr.*, Vol. 4, 1915, No. 9, pp. 959-985. Rome.

MOORHEAD, M. K. **Burma.** *Suppl. to Commerce Repts.*, Ann. Series, 1916, No. 50a, pp. 18-24. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

— **Saigon, Trade of, Report for the Year 1914 on the.** 18 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5538. London, 1915.

— **Senggora [Siam], Consular District of, Trade and Commerce of the, Report for the Year April 1, 1913, to March 31, 1914, on the.** 13 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5447. London, 1915.

Commission de délimitation de la frontière entre l'Indo-Chine et le Siam, 1907-8. 5 secteurs. 1:200,000. Service Géographique de l'Indo-Chine, [Hanoi], 1907-9.

Commission de délimitation entre l'Indo-Chine et le Siam. Sheets: Bassac, Dangrek, Grand Lac, Haute Mé-Nam, Khong, Mg. Khop-Mg. Xieng Lom, Mg. Krat, Mg. Nan, Nam Heung, Pak-Lay, Phnom Coulen. 1:200,000. H. Barrère, Editeur-Géographe, Paris, [1907?].

## AUSTRALASIA AND OCEANIA

## MELANESIA, MICRONESIA, POLYNESIA

DALY, R. A. **Problems of the Pacific Islands.** Maps, diagrs., ill. *Amer. Journ. of Sci.*, Vol. 41, 1916, Feb., pp. 153-186. [Abstracted in this number on p. 303.]

JAGGAR, T. A., JR. **Activity of Mauna Loa, Hawaii, December-January, 1914-15.** Map, diagrs., ill. *Amer. Journ. of Science*, Vol. 40, 1915, Dec., pp. 621-639. [See abstract in the *March Review*, pp. 222-223.]

MACCURDY, G. G. **Race in the Pacific Area, with Special Reference to the Origin of the American Indians: Antiquity of Occupation.** *Amer. Anthropologist*, Vol. 17, 1915, No. 4, pp. 708-711.

MAYER, A. G. **The Islands of the Mid-Pacific.** Map, diagrs., ill. *The Scientific Monthly*, Vol. 2, 1916, No. 2, pp. 125-148. [Abstracted in this number, pp. 303-304.]

— **New Caledonia, Trade, etc., of, Report for the Year 1914 on the.** 14 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5533. London, 1915.

— **Society Islands, Trade and Commerce of the, Report for the Year 1914 on the.** 12 pp. *Diplomatic and Consular Repts.*, Ann. Series, No. 5552. London, 1916. [The war is responsible for a degree of improvement in the cultivation of Tahiti. Many Chinese traders arriving there and finding no opening for their usual business offered themselves as laborers or started small plantations on their own account.]

## POLAR

## ANTARCTIC

MOSSMAN, R. C. **On a See-Saw of Barometric Pressure, Temperature, and Wind Velocity between the Weddell Sea and the Ross Sea.** Map. *Proc. Royal Soc. Edinburgh*, Vol. 35, 1914-1915, Part 2, pp. 203-216.

The author is an authority on Antaretic meteorology. He has lately been devoting himself especially to a study of the correlations which exist between seasonal meteorological conditions in different parts of the world, with particular reference to the Antarctic area. That the whole atmospheric system, of the so-called "permanent" areas of high and low pressure and of the prevailing winds, should be geared in together, like the cog-wheels of a great machine, is in no way surprising. The only surprising thing

is that attention has only recently been drawn to this important aspect of world meteorology.

The data relate to the years 1902, 1903, 1911, and 1912, and were derived from Scott's two expeditions, the Scottish National Antarctic Expedition, the Argentine Meteorological Office, the Nordenskjöld Expedition, and the German South Polar Expedition. A pronounced see-saw in the case of pressure and wind velocity at all seasons of the year seems to be established between McMurdo Sound (Ross Sea) and Laurie Island, South Orkneys. The temperature results, except in winter, are indefinite. The inquiry has been extended outside of the special areas under investigation with a view to ascertaining whether there are any seasonal correlations between McMurdo Sound and other places in adjacent latitudes of the southern hemisphere. Seasonal contrasts seem to exist between the Ross Sea and parts of West Australia, New Zealand, and southern South America.

Investigations of this kind are not only extremely interesting in themselves but they have a much larger importance because of the possibility which they suggest, in the future, of long-range forecasts. Of course, Antarctic meteorological data are rather discouragingly fragmentary, and therefore they do not yet lend themselves to the most satisfactory use. But we need just such painstaking work as Mr. Mossman is doing to emphasize the need of fixed observatories in high southern latitudes. R. DEC. WARD.

LEVICK, G. M. **Natural History of the Adélie Penguin.** Ills. *British Antarctic Expedition, 1910, Natural History Report: Zoology*, Vol. 1, No. 2, pp. 55-84. British Museum, London, 1915.

#### WORLD AS A WHOLE AND LARGER PARTS

BROWN, W. C., AND P. H. JOHNSON. **The Home of Man. Part 3: America.** (Series: *The New Outlook Geography*.) 282 pp. Maps, ill., index. G. G. Harrap & Co., London, 1914. 1s. 9d.  $7\frac{1}{2} \times 5\frac{1}{2}$ .

This is one of a series covering various parts of the earth as the "Home of Man." The principal countries of North and South America are discussed in detail. From the number of questions interspersed with the subject-matter one judges that the book is intended as a text for elementary schools. Many of the questions are good because they are developmental in character. On the other hand, they are so arranged as to disturb continuity of thought, a factor, it would seem, very desirable for children.

Maps are frequent but not always good. The characteristic English black-and-white is used, with parallels and meridians lacking. The rather inaccurate abbreviations of the names of states upon the maps of the United States seem almost without excuse. The rainfall map of North America on pages 53 and 54 and the map on page 55 showing storm tracks in the United States could be more accurate. The map on page 110 entitled "Transcontinental Routes of British North America" leaves the impression that Duluth is in Canada. In the chapter on the History of North America, all too brief, the maps lack physical features and hence lose very much of their intended value.

With careful revision the book would have much greater value.

EUGENE VAN CLEEF.

BUNTING, W. L., AND H. L. COLLEN. **A Geography of the British Empire.** 159 pp. Maps, ill., index. University Press, Cambridge, 1913.  $10 \times 7\frac{1}{2}$ .

The authors say that "this book is intended for the use of higher classes in [English] Preparatory Schools." The first part gives briefly some of the fundamental subjects of physical geography, and map reading. The authors have not intended to lay much stress on these subjects, for they write, "the early part makes no pretense at fullness but is to be regarded as the minimum of introduction to an elementary work of this kind." It is expected that the teacher will supplement the outlines given by illustrations of his own selection. The geography of the British Empire is considered, of course, in an elementary manner. The physiographic control over life and the development of the empire are discussed. Throughout the book geographical questions are asked which the pupil himself must solve. A good atlas is to be used with the text. There are numerous photographic illustrations and maps and diagrams in black and white.

WILBUR GREELEY BURROUGHS.

NEWBIGIN, M. I. **The British Empire Beyond the Seas: An Introduction to World Geography.** xii and 351 pp. Maps, diagrs., index. G. Bell & Sons, London, 1914. 3s. 6d.  $7\frac{1}{2} \times 5$ .

A book for pupils who have both a rudimentary knowledge of world geography and a somewhat more detailed knowledge of the geography of the British Isles. The author



says that, within the limits of the time usually available in school, it is impossible to treat world geography as a whole in any detail; but if pupils are allowed to leave school with no knowledge of detail save in the case of the British Isles, they will have missed a very large part of the value to be obtained from geography. Because the British Empire contains types of practically all varieties of climate, surface, and modes of land utilization, the author treats the subject in such a manner that the pupil may acquire a knowledge of the conditions and principles of world geography by studying the British Empire. The relation of the inorganic to the organic is emphasized throughout.

The first part deals with the climate and cultivated plants of the empire; in the second part are considered those portions of the empire having cool or cold winters, warm summers and mild winters, hot regions with little native cultivation, hot regions with extensive native cultivation. Maps, diagrams, etc., are numerous. The book is well and interestingly written.

WILBUR GREELEY BURROUGHS.

## PHYSICAL GEOGRAPHY

### GEOLOGY AND GEOMORPHOLOGY

REINECKE, LEOPOLD. **Average Regional Slope, a Criterion for the Subdivision of Old Erosion Surfaces.** 20 pp. Map, diagrs., ills. Reprinted from *Journ. of Geol.*, Vol. 24, 1916, No. 1. [Cover incorrectly gives 1915.]

It would be a great help in cases of disputed interpretations of old surfaces of erosion if the investigators presented at least the facts of slope declivity, for in such cases it is often not so much a question of the actual form as the stage in the erosion cycle which the form denotes. The Interior Plateau of British Columbia is at the present time in a very interesting stage of investigation. Nearly a half dozen interpretations have been made of the meaning of its erosion forms, but no one has hitherto presented the actual facts concerning the regional slopes of the province and their bearing on the possible interpretations.

The old upland surface of the Interior Plateau is obviously the product of a long erosion cycle. Its average slopes, measured from the higher areas of ridges between main drainage lines, vary from 150 to over 300 feet to the mile. The word "slope" in this case means the percentage of vertical to horizontal distance. For this investigation profiles, drawn in the direction of the main drainage lines and at right angles to them, assisted in determining whether the landforms are the result of one or more cycles of erosion, whether other than normal processes shaped the forms, and whether tilting or warping has taken place since the main erosion features were formed. It is argued that the criteria of plane-like surfaces, that is, the generally even sky-line, may exist in a surface whose detailed surfaces run from 100 to 300 feet to the mile; but they may be caused merely by the merging of several ridge lines of entirely different elevation in the observer's line of sight. Those unseen portions of the ridges which fall below the sky-line may have considerable declivity. It is also emphasized that the structure and topography are discordant not only in the case of the peneplain but also in the case of land surfaces in a late stage of development. This, however, is not a new conclusion. It has been pointed out before and is generally accepted by physiographers. The author suggests (1) that the term "peneplain" be restricted to surfaces with average slope of less than two per cent—that is, 105 feet to the mile—and (2) that surfaces of steeper gradient be referred to as "beveled hills," though it is doubtful whether so crude a phrase will gain general acceptance.

The paper is marred by the absence of some important acknowledgments.

DAVISON, CHARLES. **The Naming of Earthquakes.** *Nature*, No. 2412, Vol. 96, 1916, Jan. 20, p. 566.

HOLMSEN, GUNNAR. **Om jordlags langsomme glidning, solifluktion.** Diagr., ills. *Norske Geogr. Selskaps Aarbok*, Vol. 25, 1913-14, pp. 25-41. Christiania. [On solifluktion.]

LEITH, C. K., AND W. J. MEAD. **Metamorphic Geology: A Text-Book.** xxiii and 337 pp. Diagr., ills., index. Henry Holt & Co., New York, 1915. \$2.50. 8½ x 6.

MONTESSUS DE BALLORE, F. DE. **A Problem in Seismological Geology: On the Seismogenic Influence of Parallel Shelf-Faults.** Maps, diagrs. *Bull. Seismolog. Soc. of Amer.*, Vol. 5, 1915, No. 3, pp. 150-154. [By "parallel shelf-faults" are meant the faults enclosing a rift valley. The Rhine *graben* between Basel and Mainz and the Erythrean rift valley are selected for discussion.]

## METEOROLOGY AND CLIMATOLOGY

PENCK, ALBRECHT. **Die Formen der Landoberfläche und Verschiebungen der Klimagürtel.** *Sitzungsber. der Kgl. Preussischen Akad. der Wiss.*, 1913, No. 4, pp. 77-97. (Abstract in: EDUARD BRÜCKNER, **Albrecht Penck über die Verschiebung der Klimagürtel in der Quartärzeit.** *Map. Zeitschr. für Gletscherkunde*, Vol. 9, 1915, No. 4, pp. 276-283.)

PENCK, ALBRECHT. **The Shifting of the Climatic Belts.** *Map. Scottish Geogr. Mag.*, Vol. 30, 1914, No. 6, pp. 281-293.

In these two recent articles Professor Penck has advanced the hypothesis that climatic changes are due primarily to a shifting of climatic zones alternately equatorward and poleward. He apparently applies this hypothesis not only to the Glacial Period but to historic changes such as the "period of extreme dryness" of which "there are . . . many indications . . . some centuries after the beginning of the Christian era." The basis for this hypothesis is the contrast between the salt lakes, sand dunes, and general conditions on the poleward and equatorward sides of the great desert belts. For instance, Lake Chad on the equatorward side of the northern dry belt has the appearance of a newly formed lake which has not yet become highly saline and is still in process of enlargement, although it fluctuates greatly from decade to decade. The Dead Sea on the other side of the belt shows abundant evidences that it has long been diminishing in spite of its fluctuations. It is intensely salt and is surrounded by a large number of strands proving that the level has fallen. The lakes around Mexico City resemble Chad and present the same contrast with Great Salt Lake that Chad presents with the Dead Sea. Such facts "point to variations in climate, to increase of aridity on the polar side, to increase of humidity on the equatorial side. . . . Very characteristic are the phenomena of the Sahara. In the north there are living dunes consisting of wind-blown sand; the dead dunes, however, covered by sparse vegetation, are confined to the south, and these dead dunes stretch beyond the arid region far into the humid zone along the right bank of the Niger." In the same way on the equatorward side of the Kalahari Desert the dunes are dead and fixed, indicating that in the last few thousand years there has been an expansion of the area of tropical rains.

"All this leads us to assume that the area of extreme aridity in Africa once lay much nearer the equator than it does today, exactly as was the case in both Americas, and guided by the phenomena of the Great Basin we may fix this period in the Ice Age. The great Ice Age presents itself, then, neither as a period of extreme cold—as was originally held—nor as a period of excessive humidity over the whole earth, but as a period during which the climate belts of the world lay some four or five degrees nearer the equator, while the snow-line was found more than 3,300 feet lower. . . . The shifting of the climate belts, however, has never gone so far that one belt has entirely usurped the position of another." As a result of this some areas have grown drier and some have grown moister, while between them there have been relatively constant regions.

Penck's hypothesis of the shifting of climatic zones is identical with one reached independently and on wholly different grounds by the reviewer, whose conclusions were first published in an article on "The Shifting of Climatic Zones in Mexico" in the *Bulletin* of this Society in 1913 (Vol. 45, pp. 1-12 and 107-116). They were amplified in "The Climatic Factor," 1914, and in the *Bulletin of the Geological Society of America*, Vol. 25, 1914, pp. 477-590. The matter is so important that it is worth while to quote from "The Climatic Factor" a few words which were written before the reviewer had heard of Penck's hypothesis and which therefore strengthen the hypothesis by showing that different lines of study lead to the same conclusion. "Changes of climate are probably characterized by the shifting of the world's great climatic zones from north to south and the reverse" (p. 4). . . . "During the past 2,000 to 3,000 years . . . the general shifting seems to have carried the conditions of more southerly regions into those farther north. This would mean that at the beginning of the Christian era or earlier the zone of westerly storms, during the winter but not necessarily in summer, lay farther south than today, and thereby made the present subtropical zone less arid than at present. The natural corollary of this would be that the subtropical zone of aridity was also displaced southward. This would have led to a diminution of winter rainfall and hence of vegetation along the northern edge of the equatorial zone. . . . Thus jungle would have been caused to take the place of genuine, dense forests," (p. 190) and the Mayas of Central America would have been able to exist and flourish, although now their great ruins are in a region where progress is practically impossible because of the dense vegetation and devastating tropical diseases.

Penck attempts to explain the equatorward shifting of climatic zones during the Glacial Period by a lowering of terrestrial temperature, "which would bring about not only an advance in the snow-line, but at the same time a shifting of all the climatic

belts equatorwards. If the heat supply of the earth decreases, the atmospheric circulation will become less intense. The great areas of high pressure will become weaker and the horse latitudes must move toward the equator. And it is they that determine the position of the arid areas upon the land masses. Thus everything points to the fact that the . . . climate of the Ice Age was a period of reduced heat supply.'

This last conclusion is open to question. Köppen and Newcomb have shown beyond the possibility of doubt that at times of many sunspots the earth's surface is cooler than normal (see *Bull. Amer. Geogr. Soc.*, Vol. 47, 1915, pp. 184-189). The work of Arctowski, Bigelow, Kullmer, and others shows with almost equal certainty that at such times the activity of the atmospheric circulation is greater than usual. The measurements of solar radiation by Abbott and others show that when sunspots are numerous the sun furnishes a heat supply greater than usual. Moreover, Hobbs has made it clear that today continental glaciation in Greenland and Antarctica is accompanied by markedly high atmospheric pressure. An increase of the extent of the glaciated areas would inevitably be accompanied by an increase in the size and intensity of the areas of high pressure. Thus there is good ground for thinking that instead of being a period of decreased heat supply, weaker barometric gradients, and gentler winds, as Penck's supposition demands, the Glacial Period may actually have been a time of increased heat supply, which gave rise to stronger barometric gradients, stronger winds, a consequent invasion of the more equatorial climatic belts by those lying toward the poles, and finally a greater removal of heat from the earth's surface by convection both at the equator and to a less degree farther poleward. If this supposition is true we may accept Penck's hypothesis of a shifting of zones but not his explanation of the cause. It seems probable that the shifting has been much more complicated than would appear at first sight, for the areas of continental and oceanic pressure as well as the general zones of climate enter into the problem.

ELLSWORTH HUNTINGTON.

GALÁN, ANTONIO. **Climatic Fluctuations During the Historic Epoch.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 608. [Author's abstract of a paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916.]

HERRMAN, C. F. VON. **Position of Meteorology Among the Sciences.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 609. [Author's abstract of a paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916.]

HUMPHREYS, W. J. **Wind Velocity and Elevations.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 609. [Author's abstract of a paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916.]

HUNTINGTON, ELLSWORTH. **Solar Activity, Cyclonic Storms, and Climatic Changes.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 609. [Abstract of a paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916.]

PETERSSON, O. **Climatic Variations in Historic and Prehistoric Time.** 26 pp. Maps, diagrs., ill. Reprinted from *Svenska Hydrogr. Biol. Kommiss. Skrifter*, No. 5, 1914. [Extended comment will be found in the article by Ellsworth Huntington on "Climatic Variations and Economic Cycles" in the *March Review*, pp. 192-202.]

TALMAN, C. F. **Meteorology and Seismology at the Pan American Scientific Congress.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, pp. 605-606. [Lists the papers read and is followed by selected abstracts of some of them. The titles of the majority of the abstracted papers are listed in this number in their respective places.]

THIEME, B. **Funkentelegraphische meteorologische Stationen.** Ills. *Meteorol. Zeitschr.*, Vol. 32, 1915, No. 10, pp. 449-460.

— **Verandering van het klimaat in historischen tijd.** *Vragen van den Dag*, Vol. 21, 1916, No. 1, pp. 88-89.

#### ECONOMIC GEOGRAPHY

CLUTE, R. L. **Practical Lessons in Tropical Agriculture: Book 1.** x and 228 pp. Ills., index. World Book Co., Yonkers, N. Y., 1914. 60 cents.  $7\frac{1}{2} \times 5\frac{1}{2}$ .

At first thought, one would not expect the textbook that approaches an ideal to originate in the Philippines; yet this is precisely what has happened. This volume is one of the most teachable texts in recent years. Part I is entitled "The Plant and Its Parts" and Part II, "Practical Applications of the Laws Governing Plant Life." In every instance the illustrations used for applying principles are taken from the Philippines and not from faraway lands. At the end of the chapters are exercises and questions which are good, common sense. The diagrams are clear and well done, so that any student of average ability may easily understand them. The book is alive, expressions being fresh and crisp, thus avoiding a lag in the child's interest. One striking feature is that, in discussing the theoretical phases of plant life, applica-

tions are made to food plants instead of the customary flowering plants. Thus at every turn the reader is acquiring practical information. The appendix includes instructions for making a balance and a rain-gage; a bibliography; and a classification of the more important economic plants of the Philippines. The index, consistent with the rest of the text, is very complete and comprehensive.

EUGENE VAN CLEEF.

BOYER, JACQUES. **Kapok—A New Textile Fibre: Its Manufacture and Industrial Applications.** Ills. *Sci. Amer. Suppl.*, No. 2094, Vol. 81, 1916, Feb. 19, pp. 120-121. [A method of utilizing the down of the silk-cotton tree that flourishes in Java and elsewhere in the tropics.]

— **Cassava: Its Cultivation and Utilisation.** *Bull. Imperial Inst.*, Vol. 13, 1915, No. 4, pp. 581-611.

DESCOMBES, PAUL. **Reforestation and Occult Condensation.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, pp. 617-618. [Translated from the French original, published in *Comptes Rendus Assoc. Franç. pour l'Avanc. des Sci.*, 43<sup>me</sup> sess., Le Havre, 1914: *Notes et Mém.*, pp. 337-341.]

JAGOW, KURT. **Der Hering im Volksglauben und in der älteren Forschung.** *Archiv. für Fischereigeschichte*, 1915, Oct., No. 6, pp. 213-247. Berlin.

LÖFGREN, ALBERTO. **A tamareira e seu cultivo.** 9 pp. Ills. *Inspectoria de Obras contra as Seccas Publ. No. 37.* Rio de Janeiro, 1912. [On the cultivation of the date-palm.]

MCADIE, ALEXANDER. **The Theory and Practice of Frost Fighting.** Diagr., ill. *The Scientific Monthly*, Vol. 1, 1915, No. 3, pp. 292-301. [See abstract in the Feb. Review, p. 146.]

MOORE, H. L. **Economic Cycles: Their Law and Cause.** viii and 149 pp. Diagr. The Macmillan Co., New York, 1914. \$2. 9 x 6. [Extended comment will be found in the article by Ellsworth Huntington on "Climatic Variations and Economic Cycles" in the March Review, pp. 192-202.]

WARBURG, O. **Der Krieg und die koloniale Landwirtschaft.** *Der Tropenpflanzer*, Vol. 19, 1916, No. 1, pp. 1-24.

WILLIAMS, F. E. **Where Our Principal Minerals Come From.** *Journ. of Geogr.*, Vol. 14, 1915-16, No. 4, pp. 101-107.

#### HISTORY OF GEOGRAPHY AND EXPLORATION

ALEXANDER, P. F., edit. **The North-West and North-East Passages, 1576-1611.** (Series: Cambridge Travel Books.) xx and 211 pp. Ills. University Press, Cambridge (G. P. Putnam's Sons, New York), 1915. 75 cents. 8 x 5½.

The series to which this volume belongs is intended to make available the records of geographical discovery. The present volume covers but a short period, thirty-five years, and is devoted to six attempts to penetrate the Northwest Passage and one attempt on the Northeast. It includes two voyages of Frobisher, three of Davis, one of Hudson (his last), and one of Barents (his third). These accounts are the original records as written by the explorers or one of their companions, spelling and punctuation only having been modernized. The tales thus left as originally reported are more valuable than any transcription could be and have also a charm and atmosphere which could not be transferred.

ROBERT M. BROWN.

BLAIKIE, W. G. **The Personal Life of David Livingstone, Chiefly from His Unpublished Journals and Correspondence in the Possession of His Family.** 508 pp. Map. Fleming H. Revell Co., New York, no date. 50 cents. 7½ x 5.

At the request of members of Livingstone's family Doctor Blaikie wrote this book to make the world better acquainted with the character of the great explorer, for in Livingstone's own books his modesty led him to say little of himself. Doctor Blaikie says: "Those who knew Livingstone best feel that little is known of the strength of his affections, the depth and purity of his devotion, or the intensity of his aspirations as a Christian missionary. The growth of his character and the providential shaping of his career are also matters of remarkable interest, of which not much has yet been made known." Even the history of Livingstone's African life is given more completely than in previous accounts, and many of the chapters contain material of which the public has known little or nothing.

Among the sources from which Doctor Blaikie has drawn intimate details of Livingstone's life are his unpublished journals, his correspondence with friends, and information furnished by relatives and friends, still living. The book makes an important addition to the works already published on this great missionary and Christian explorer.

WILBUR GREELEY BURROUGHS.